

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A golf swing diagnosis system comprising:

a photographing ~~means for photographing~~ unit configured to photograph a swing moving image in a color image when a golfer swings;

a capturing ~~means for capturing~~ unit configured to capture said photographed color image into a computer;

a recognizing ~~means for recognizing~~ unit configured to recognize at least two reference points which are specified in colors on said color image of said computer and are spaced at a given interval in a longitudinal direction of a golf club shaft gripped by said golfer; and ~~recognizing to recognize~~ one or more reference points which are specified in colors, move during said swing, and are selected from among a golfer's head, neck, right shoulder, left shoulder, right elbow, left elbow, left wrist, right wrist, right waist, left waist, right knee, left knee, right ankle, left ankle, right toe, and left toe;

a converting ~~means for converting~~ unit configured to convert said swing moving image into a plurality of still images;

a ~~means for computing~~ unit configured to compute a plurality of evaluation items to be checked including a swing posture and a shaft angle in a range from an addressing state till an impact state to express said evaluation items by numeric values, based on coordinate data of each of said reference points, disposed on a plurality of said still images, which are discriminated in said colors; and

a diagnosing ~~means for diagnosing~~ unit configured to diagnose said golfer's swing by comparing said data expressed by numeric values with judging data inputted to said computer in advance as ideal values,

wherein said golfer's swing is photographed by two cameras at a position forward from said golfer and at a position rearward from said golfer in a ball fly line to obtain a front image and a rear image along said ball fly line, whereby two-dimensional coordinate data is obtained or three-dimensional coordinate data is obtained by converting a photographed image on said computer.

2. (Currently Amended) The golf swing diagnosis system according to claim 1, wherein said ~~specific~~-specified colors to be discriminated as said reference points are colors attached to said shaft as a design, colors of golfer's clothes or colors applied to said shaft or said golfer at a photographing time.

3. (Original) The golf swing diagnosis system according to claim 1, wherein said reference points which are specified in colors and move during said golfer's swing include said golfer's wrist and elbow of an arm opposite to those of said golfer's skillful arm.

4. (Original) The golf swing diagnosis system according to claim 1, wherein the number of said reference points which are specified in colors is not less than three nor more than 18.

5. (Original) The golf swing diagnosis system according to claim 1, wherein said evaluation items to be checked include a shaft angle, an angle of said golfer's wrist, a position and an angle of said golfer's spine, both elbows, both shoulders, both waists, both knees, and grip which are computed from said coordinate data on each still image.

6. (Currently Amended) The golf swing diagnosis system according to claim 1, ~~wherein said golfer's swing is photographed by two cameras at a position forward from said golfer and at a position rearward from said golfer in a ball fly line to obtain a front image and a rear image along said ball fly line, whereby two dimensional coordinate data is obtained or three dimensional coordinate data is obtained by converting a photographed image on said computer; or~~
~~swing images photographed by two or more cameras at positions other than said position forward from said golfer and said position rearward from said golfer along said ball fly line are converted into three dimensional data on said computer to obtain coordinate data when said golfer is viewed at said position forward from said golfer and at said position rearward from said golfer in said ball fly line,~~

wherein said evaluation items to be checked include any one of a position of said golf ball, a width of said golfer's both ankles, an angle of said golfer's wrist, a position of said golfer's head, both waists, and grip viewed forward from said golfer; and a position of an axis of said golfer's spine, an angle of said spine, an angle of said knee, a position of both waists, both elbows, both shoulders, both knees, and both toes, and her/his grip, and a swing plane viewed at said position rearward from said golfer along said ball fly line.

7. (Original) The golf swing diagnosis system according to claim 1, wherein when said golfer is viewed forward or/and rearward from said golfer, a swing posture of said evaluation item of said checking point includes any one of an addressing state, a state in which a shaft is an eight o'clock state, a state in which an arm opposite to a skillful arm is parallel with the ground, a top state, a state in which said arm opposite to said skillful arm is parallel with the ground in a swing-down motion, a state in which said shaft is in a nine o'clock state of a down-swing when a movement of said shaft is regarded as a movement of a hand of a clock, and an impact state.

8. (Original) The golf swing diagnosis system according to claim 7, wherein said eight o'clock state of said shaft means a state of a swing posture when a grip intersects with a perpendicular line to a right side of a right leg.

9. (Currently Amended) The golf swing diagnosis system according to claim 1, wherein said ~~diagnosis means~~diagnosing unit has a plurality of judging data having ideal values in dependence on handicap at golf, golf career, sex, age, height, weight, and a golfer's tendency of a hit-ball direction inputted to said computer in advance; and said ~~diagnosis means~~diagnosing unit selects appropriate judging data from a plurality of said judging data and compares said golfer's numeric data obtained by photographing said golfer's swing with said selected judging data.

10. (Original) The golf swing diagnosis system according to claim 1, wherein at a time of a shot of a golf ball in said photographed swing, ball-hitting conditions

including a ball speed, a deviation angle, a launch angle, and a spin amount are measured.

11. (Original) The golf swing diagnosis system according to claim 1, wherein at least one unoperative reference point which does not move from an addressing till an impact is specified in a color to evaluate movements of said other reference points relative to said unoperative reference point.

12. (New) The golf swing diagnosis system according to claim 1, wherein the at least one unoperative reference point comprises a point on the golf ball or corresponding golf tee.

13. (New) The golf swing diagnosis system according to claim 1, wherein the at least two reference points are manually selected using a computer to thereby confirm each of the least two reference points have been recognized by the computer.

14. (New) The golf swing diagnosis system according to claim 3, wherein a number of the reference points on the arm opposite to the golfer's skillful arm is greater than that of reference points on the golfer's skillful arm.

15. (New) A golf swing diagnosis system comprising:
a photographing unit configured to photograph a swing moving image in a color image when a golfer swings;

a capturing unit configured to capture said photographed color image into a computer;

a recognizing unit configured to recognize at least two reference points which are specified in colors on said color image of said computer and are spaced at a given interval in a longitudinal direction of a golf club shaft gripped by said golf, and to recognize one or more reference points which are specified in colors, move during said swing, and are selected from among a golfer's head, neck, right shoulder, left shoulder, right elbow, left elbow, left wrist, right wrist, right waist, left waist, right knee, left knee, right ankle, left ankle, right toe, and left toe;

a converting unit configured to convert said swing moving image into a plurality of still images;

a computing unit configured to compute a plurality of evaluation items to be checked including a swing posture and a shaft angle in a range from an addressing state till an impact state to express said evaluation items by numeric values, based on coordinate data of each of said reference points, disposed on a plurality of said still images, which are discriminated in said colors; and

a diagnosing unit configured to diagnose said golfer's swing by comparing said data expressed by numeric values with judging data inputted to said computer in advance as ideal values,

wherein at least one unoperative reference point which does not move from an addressing till an impact is specified in a color to evaluate movements of said other reference points relative to said unoperative reference point.